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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,700	04/13/2004	Naoto Matsunami	500.43772X00	2922

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EXAMINER	
DOAN, DUC T	
ART UNIT	PAPER NUMBER
2188	

MAIL DATE	DELIVERY MODE
05/09/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/822,700	MATSUNAMI ET AL.	
	Examiner	Art Unit	
	DUC T. DOAN	2188	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 April 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *21-23 and 25-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *21-23, and 25-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set for in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.1 14, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.1 14. Applicant's submission filed on 4/16/2008 has been entered.

Claims 1-27 have been presented in the application.

Claims 1-29 and 24 have been canceled.

Claim 21-23 and 25-27 remain pending.

Claims 21-23, and 25-27 are rejected.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art

to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 21-23, 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gole et al (US Pub 2005/0015460) in view of Wong (US 2001/0051955).

As in claim 21, Gole discloses a first storage system connected (Gole's Fig 1 200a), via a network to a computer (Gole's Fig 1 104 client) and a second storage system (Gole's Fig 1 200b) comprising:

a first storage device which stores data related to a first file system (Gole's Fig 1, 112 RED DISK SHELF); a first controller which provides the first file system and a second file system to a computer (Gole's Fig 1, inherently controller logic of a storage system, Red storage system, controls data transferring with client 104, herein a first controller);

and a second controller for controlling input/output operations to/from said second storage system with location of data related to the second file system (Gole's Fig 1, inherently controller logic of a storage system, Red storage system, controls data transferring to storage 114, herein a second storage controller), wherein the second storage system includes a second storage device which stores data related to the second file system (Gole's Fig 1 200b); and a third controller connect to the second controller for controlling the second storage devices (Gole's Fig 1 , inherently controller logic of a storage system, Blue storage system, controls data transferring with client 104, herein a third controller),

wherein the second controller accesses to the second storage system with a command representing an area where the data is stored in the second storage device (Gole's paragraph 53 peer to peer transfer, server A sends RDMA command representing data stored in region of 114);

Gole discloses wherein the first storage system is coupled to the second storage system via a storage area network (SAN) and communicates therewith according to a block input/output (I/O) interface (Gole's paragraph 6), and wherein the first storage system is coupled to the computer via a local area network (LAN) and communicates therewith according to a file I/0 interface (Gole's paragraph 5 and 25);

Gole does not expressly disclose the claim's details associating with mounting file system. However, Wong's Fig 4 discloses a method of several file systems being mirrored across networks of storage systems. It would have been obvious to one of ordinary skill in the art at the time of invention to include the file system mirroring method to providing several copies of data to several clients across the networks (Wong's paragraph 20), into Gole's system and thereby further to provide more efficient and more reliable service to the clients across the networks (see Wong's paragraph 19 lines 26-34). Wong further discloses file systems are generally being accessed by any server using the typical known technique of mounting a remote file system (i.e mounting a root directory of a remote file system) at a mount point in a local file system in a single directory tree such that data in the remote file system is ready accessed by host connecting with the local file system by using a standard interface (see Wong's paragraphs 61-62; Wong's paragraph 67 further discloses two file systems mounting on a single directory);

As in claim 22, Gole disclose wherein each of the first storage device and the second storage device configuring a plurality of logical volumes (physical disks are organized into

logical volumes such as LUN and vdisk objects, see Gole's paragraphs 34, and 36), if a request related to the second file system is received from the computer, the first storage controller converts the request into a command for a logical volume of the second storage device, and the second controller sends, to the second storage system, the command (Gole's Fig 3, controlling logic translate NAS request (file system request) to SAN's block i/o commands and send to storage disks, paragraph 45).

As in claim 23, Gole further discloses wherein the first storage system is connected to the computer via a first network (Red storage system connects to client 104), and the second storage system (Blue storage system) is connected to the computer via a second network different from the first network (Blue storage system connects to Red storage system and to client 104 for peer to peer transfer).

As in claim 25, Gole discloses wherein the first controller receives an access request for a file from the computer, if the access request identifies a file configuring data stored in the second storage device, the first storage controller accesses data related to the file stored in the second storage device through the second controller (Gole's paragraph 53 peer to peer transfer of data identified with vlun, lun etc..).

As in claim 26, Gole further discloses that first controller manages location of data related to the first file system and the second file system, if the first controller receives a request for data related to the second file system (Gole's a storage system receives peer to peer request from client); wherein the first controller sends location of data to second storage system via the second controller (Gole's paragraph 53, peer to peer RDMA data transfer, request is forward to the partner storage system for retrieving corresponding data);

As in claim 27, Gole discloses wherein the first controller manages relationship between either the first or the second file system and the logical volume related to either the first file system or the second file system, if a request for the second file system is received, the first controller specifies the location of the logical volume is configured to the second storage device in the second storage system according to the relationship (Gole's paragraph 53, the first controller received client's RDMA request, logic of file system 365 and SCSI target module determine data location data of appropriate vlun, and lun to send access command).

Response to Arguments

Applicant's arguments in response to the last office action has been fully considered but they are they are mooted in view of new ground(s) of rejection applied with new reference(s) found.

Conclusion

When responding to the office action, Applicant is advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist examiner to locate the appropriate paragraphs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc T. Doan whose telephone number is 571-272-4171. The examiner can normally be reached on M-F 8:00 AM 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung S. Sough can be reached on 571-272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/Hyung S SOUGH/

Supervisory Patent Examiner, Art Unit 2188

05/07/08